

# PTVFIX 6/12X2,5-NS35A BU - Distribution block



1019548

<https://www.phoenixcontact.com/us/products/1019548>

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Distribution block, nom. voltage: 690 V, nominal current: 24 A, number of connections: 13, number of positions: 1, connection method: Push-in connection, Load contact, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, Line contact, Rated cross section: 6 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 10 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: blue

## Your advantages

- Flexible use, thanks to DIN rail mounting, direct mounting or adhesive mounting
- Clear wiring, thanks to eleven different color variants
- Time-saving conductor connection, thanks to tool-free Push-in direct connection technology
- Time savings of up to 80 %, thanks to ready-to-mount blocks without manual bridging
- Space savings of up to 50 % on the DIN rail, thanks to transverse mounting

## Commercial data

Item number	1019548
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	BE09
Product key	BEA223
GTIN	4055626506296
Weight per piece (including packing)	32.11 g
Weight per piece (excluding packing)	32.11 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Notes

#### General

Note	The maximum load current of a single clamping unit must not be exceeded.
	For power distribution applications, IEC 60364-4-43:2008; modified + corrigendum Okt. 2008 (DIN VDE 0100-430:2010-10) section 433.2 ff must be observed!

### Product properties

Product type	Distributor terminal block
Number of positions	1
Number of connections	13
Number of rows	1
Potentials	1

#### Data management status

Article revision	02
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#### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Rated surge voltage	8 kV
Maximum power dissipation for nominal condition	0.77 W

### Connection data

Service Entrance	yes
Number of connections per level	13
Nominal cross section	2.5 mm <sup>2</sup>

#### Load contact

Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A3
	B3
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Cross section AWG	26 ... 12 (converted acc. to IEC)
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	26 ... 14 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve)	0.5 mm <sup>2</sup>

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Nominal current	24 A
Maximum load current	32 A (with 4 mm <sup>2</sup> conductor cross section)
Maximum total current	57 A (with 10 mm <sup>2</sup> conductor cross section)
Nominal voltage	690 V
Note	The IEC 60947-7-1 standard applies for the use of mounting accessories.
Nominal cross section	2.5 mm <sup>2</sup>

## Line contact

Stripping length	10 mm ... 12 mm
Internal cylindrical gage	A5
	B4
Conductor cross section rigid	0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Cross section AWG	20 ... 8 (converted acc. to IEC)
Conductor cross section flexible	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	20 ... 10 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve)	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Nominal current	41 A (with 6 mm <sup>2</sup> conductor cross section)
Maximum load current	57 A (with 10 mm <sup>2</sup> conductor cross section)
Maximum total current	The maximum load current of the individual terminal point must not be exceeded.
Nominal cross section	6 mm <sup>2</sup>
Connection in acc. with standard	IEC 60998-2-2
Nominal voltage	450 V (in accordance with IEC 60998-2-2)

## Load contact Connection cross sections directly pluggable

Conductor cross section rigid	0.34 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section, rigid [AWG]	22 ... 18 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>

## Line contact Connection cross sections directly pluggable

Conductor cross section rigid	1 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Conductor cross section, rigid [AWG]	18 ... 8 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	1 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	1 mm <sup>2</sup> ... 6 mm <sup>2</sup>

## Dimensions

Width	41.5 mm
Height	45.7 mm
Depth	29.2 mm
Depth on NS 35/7,5	30.9 mm

## Material specifications

Color	blue (RAL 5015)
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA
Static insulating material application in cold	-60 °C
Relative insulation material temperature index (Elec., UL 746 B)	130 °C
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R26	HL 1 - HL 3
Surface flammability NFPA 130 (ASTM E 162)	passed
Specific optical density of smoke NFPA 130 (ASTM E 662)	passed
Smoke gas toxicity NFPA 130 (SMP 800C)	passed

## Electrical tests

## Surge voltage test

Result	Test passed
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## Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq 45$ K
Result	Test passed
Short-time withstand current 6 mm <sup>2</sup>	0.72 kA
Short-time withstand current 10 mm <sup>2</sup>	1.2 kA
Result	Test passed

## Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
Result	Test passed

## Mechanical properties

## Mechanical data

Open side panel	No
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## Mechanical tests

## Mechanical strength

Result	Test passed
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## Attachment on the carrier

DIN rail/fixing support	NS 35
Result	Test passed
Note	When aligning several blocks, it is recommended to either place a DIN rail adapter underneath the connection point or a flange element between the blocks.

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	For versions with 6 or 7 connections, it is enough to place one DIN rail adapter centrally per block and place flange elements after every other block.
	Depending on the application case and mechanical load, other arrangements of the mounting accessory can also be chosen.
	When using the DIN rail adapter PTFIX-NS35, an aligned block must not protrude by more than a half.

## Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross section/weight	0.5 mm <sup>2</sup> / 0.3 kg
	6 mm <sup>2</sup> / 1.4 kg
	10 mm <sup>2</sup> / 2 kg
Result	Test passed

## Environmental and real-life conditions

### Aging

Temperature cycles	192
Result	Test passed

### Needle-flame test

Time of exposure	30 s
Result	Test passed

### Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2018-05
Spectrum	Service life test category 2, bogie-mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	6.12 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	3.12g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Result	Test passed

### Shocks

Specification	DIN EN 50155 (VDE 0115-200):2018-05
Pulse shape	Half-sine
Acceleration	30g
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Result	Test passed

### Ambient conditions

Ambient temperature (operation)	-60 °C ... 110 °C (Operating temperature range incl. self-heating; for max. short-term operating temperature, see RTI Elec.)
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Ambient temperature (storage/transport)	-25 °C ... 60 °C (for a short time, no longer than 24 h, -60°C to +70°C)
Ambient temperature (assembly)	-5 °C ... 70 °C
Ambient temperature (actuation)	-5 °C ... 70 °C
Permissible humidity (operation)	20 % ... 90 %
Permissible humidity (storage/transport)	30 % ... 70 %

## Standards and regulations

Connection in acc. with standard	IEC 60947-7-1
	IEC 60998-2-2

## Mounting

Mounting type	NS 35/7,5
	NS 35/15

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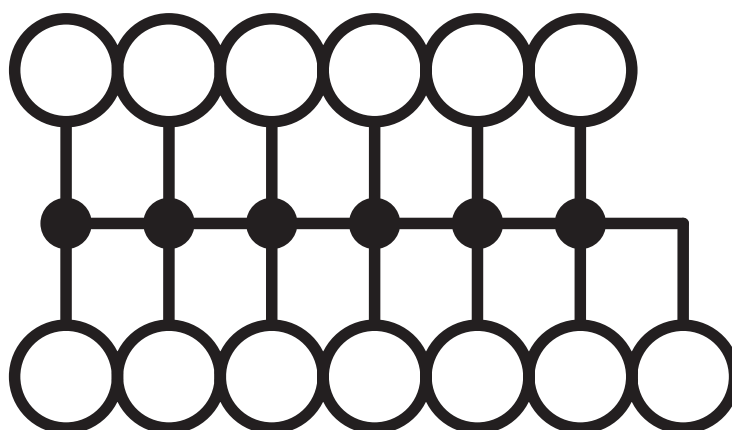
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## Drawings

Circuit diagram



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## Approvals

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**cULus Recognized**

Approval ID: E60425



**CSA**

Approval ID: 13631

**DNV**

Approval ID: TAE00004R4

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## Classifications

### ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250118

### ETIM

ETIM 9.0	EC000897
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### UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%